UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,966	05/04/2001	Richard L. Cunningham	IMD008	6935

7590 09/22/2004	EXAMINER
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ART UNIT	PAPER NUMBER
2673	17

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 May 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
  closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-19,21-46,48-54* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-19,21-46,48-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *16*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-5,7-19,21-46,48-54 is rejected under 35 U.S.C. 103(a) as being

unpatentable over Beeks (U.S. Patent No. 6,373,463) in view of Sinclair et al., (US

5,766,016) in further view of Sakamaki et al., (U.S. Patent No. 6,618,037).

As per claims 1,16,24,35 Beeks shows a method updating data value associated

with a cursor displayed in a graphical environment of a host computer based on

manipulation of at least a portion of an object coupled to the host computer (In col.5

lines 7-37) and outputting haptic feedback associated with a simulated within a

graphical environment (in Col.4 lines 20-34 and In lines 35-67). Beeks does not a show

a palpation region to do a haptic feedback. Sinclair shows a surgical simulator with

tactile feedback (In Abstract and In col.4 lines 58-67 to Col.5 lines 1-50).

It would have been obvious to one of ordinary skill in the art, at the time of the invention

was made to allow the teaching of Sinclair's into the system of Beek's because it would

have allow a use to controlling the position of the cursor in relation to the graphical

representation position of the mouse and controlling a graphical representation of a

human body part in relation to an amount of manipulation of the mouse.

Neither Beeks nor Sinclair shows the object being representative of a body part (as a hand cursor) and configured to be contacted by a hand of a user. Sakamaki shows a body part and configured to contacted by a user hand (In Fig.10a-g)(In Col.10 lines 13-27) and shows touching an object (in fig.14 to feel tactile stimulus over an object that could be a human or any other body parts In col.12 lines 22-38). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to aloe the teaching of Sakamaki's's into combined system of Beek's because it would have touched or located an object (such as anatomy) on a display with a hand gesture rather than a cursor.

A per claim 2,Beek does not show palpation program includes in computer. Sinclair shows computer includes an application program having palpation training program (see in fig.2 this program could have used for palpation program). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Sinclair's into computer system of Beek's because it would have allowed computer to sensed the palpation on a display region.

As per claims 3,4 Beek does not show Sinclair shows application programming including palpation training program which locating a predetermined target associated with the region in the graphical environment and outputting a second haptic feedback being a scaled version of first haptic feedback. Sinclair shows application programming (In Fig.2) including palpation training program which locating a predetermined target associated with the region in the graphical environment and outputting a second haptic feedback being a scaled version of first haptic feedback (in col.6 lines 5-15 and 20-60

with different region for simulation tactile chart). It would have been obvious to one of

ordinary skill in the art, at the time of the invention was made to allow the teaching of

Sinclair's into system of Beek's because it would have differentiate the different

palpation in a multiple region so a user could have felt signals of palpation differently.

As per claim 5, Beek and Sinclair does not teach outputting haptic feedback

associated with a position of virtual hand in a second region of the graphical

environment. Sakamaki shows a body part and configured to contacted by a user hand

(In Fig.10a-g)(In Col.10 lines 13-27) and shows touching an object (in fig.14 to feel

tactile stimulus over an object that could be a human or any other body parts In col.12

lines 22-38). It would have been obvious to one of ordinary skill in the art, at the time of

the invention was made to aloe the teaching of Sakamaki's's into combined system of

Beek's because it would have touched or located an object (such as anatomy) on a

display with a hand gesture rather than a cursor.

As per claims 7, 32 Beek shows haptic feedback simulates a pulse (In fig.3 the

path on display goes from 5000 to 11000 and up more considered as a pulse graphical

representation).

As per claim 8, Beek shows haptic feedback is associated with a simulated

feature that is at least one of on the surface of the region within the graphical

environment and below the surface of the region within the graphical environment (In

Fig.3 two different graphical region one with world map and below the pulse map of the

display).

As per claims 10,26,51 Beek does not specifically shows haptic feedback includes a spring force, It would have been obvious tone of ordinary skill the art, at the time of the invention was made to have a tactile feedback of Beek's could have used a spring to felt by a user a vibration force.

As per claim 17, Beek shows haptic feedback includes outputting the haptic feedback based on receiving instruction from the computer (In fig.2 element 200), the instruction including the pulse taking training program (In fig.2 element 202) including an instruction to take the simulated pulse of the simulated being (In Fig.3 bottom of the screen with different pulse going up and down on a display from 5000 to 11000).

As per claim 18, Beek shows different region with haptic feedback (In Fig.1). Beek does not teach first haptic feedback with first region and signal being associated with the interaction of the portion of the first region and second haptic feedback based on the interaction of the second region of the graphical representation, Beek and Sinclair does not teach outputting haptic feedback associated with a position of virtual hand in a second region of the graphical environment. Sakamaki shows a body part and configured to contacted by a user hand (In Fig.10a-g)(In Col.10 lines 13-27) and shows touching an object (in fig.14 to feel tactile stimulus over an object that could be a human or any other body parts In col.12 lines 22-38). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to aloe the teaching of Sakamaki's's into combined system of Beek's because it would have touched or located an object (such as anatomy) on a display with a hand gesture rather than a cursor.

As per claim 19, Beek shows haptic feedback is a scaled version of the haptic feedback (In Fig.3 with scaled of –3.5 and 245 with 17 SAT).

As per claim 21,48 Beek shows haptic feedback includes a vibration (element 502 In fig.8) and sinusoidal waveform (In col.4 lines 35-67).

As per claims 43,50,52 Beeks shows haptic feedback with a vibration, force (In Col.4 lines 20-65).

As per claims 11,27,42,44 Beeks shows the object comprises a mouse (In col.3 lines 47-49).

As per claims 12-15,28-31,45,46,53 Beeks shows actuator coupled to a mouse with an actuator to simulate feedback that capable of causing the grounded linkage to apply feedback to the user (In Col.4 lines 35-67 to Col.5 lines 1-67) and the haptic feedback includes outputting haptic feedback via pressure detector and at least one of a force and a pressure (In col.4 lines 35-47).

As per claim 54, Beek shows force sensor (In col.5 lines 12-15).

As per claims 33,34,49 Beek does not show a three dimensional graphical representation, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made to have GUI screens (I col.4 line10-15) of Beek's would have showed three dimensional representation to view for a user in more accurate way of seeing a display.

As per claims 36-41, Beeks does not specifically show computer readable medium is a portable compact disk or a DVD, which could be read over a network that contain a program of portion of virtual object hand to be produce by a processor to

generate a portion of the virtual hand in a graphical representation of at least portion of

virtual that stored memory media. It would be obvious to one of ordinary skill in the art,

at the time of the invention was made that most program are stored on a magnetic disk

that could be a Hard drive or a disk or a DVD which be connected to a network to share

information or get information from a network server. Beek does not show virtual hand

shown as a graphical representation, Sakamaki shows object being used as a cursor or

hand (In fig.10a-g), which is produced by a computer processor (In fig.1). It would have

been obvious to one of ordinary skill in the art, at the time of the invention was made to

allow the teaching of Sakamaki's into device of Beek's because it would have

representation on a display as a portion of a virtual hand so a user feel that feeling of

touching an object on a display screen is real.

Response to Arguments

3.   Applicant's arguments with respect to claims 1-5,7-19,21-46,48-54have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

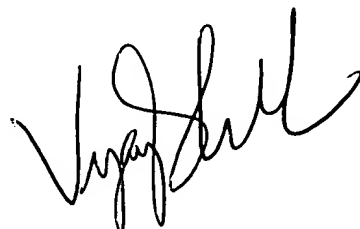mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nitin Patel whose telephone number is 703-308-7024.

The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone

numbers for the organization where this application or proceeding is assigned are 703-

872-9314 for regular communications and 703-308-9052 for After Final

communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-305-

9618.

NP
September 19, 2004

VIJAY SHANKAR
PRIMARY EXAMINER